The main objective of this in class is to create commands for Hadoop Dependent Column based No SQL Tool -HBase.

Created 5 tables for the below cases

a. Use Case 1: Locations
b. Use Case 2: Student Courses
c. Use Case 3: User –Action
d. Use Case 4: User –Friends
e. Use Case 5: Access Log

Below are the commands followed for the execution

USECASE-1

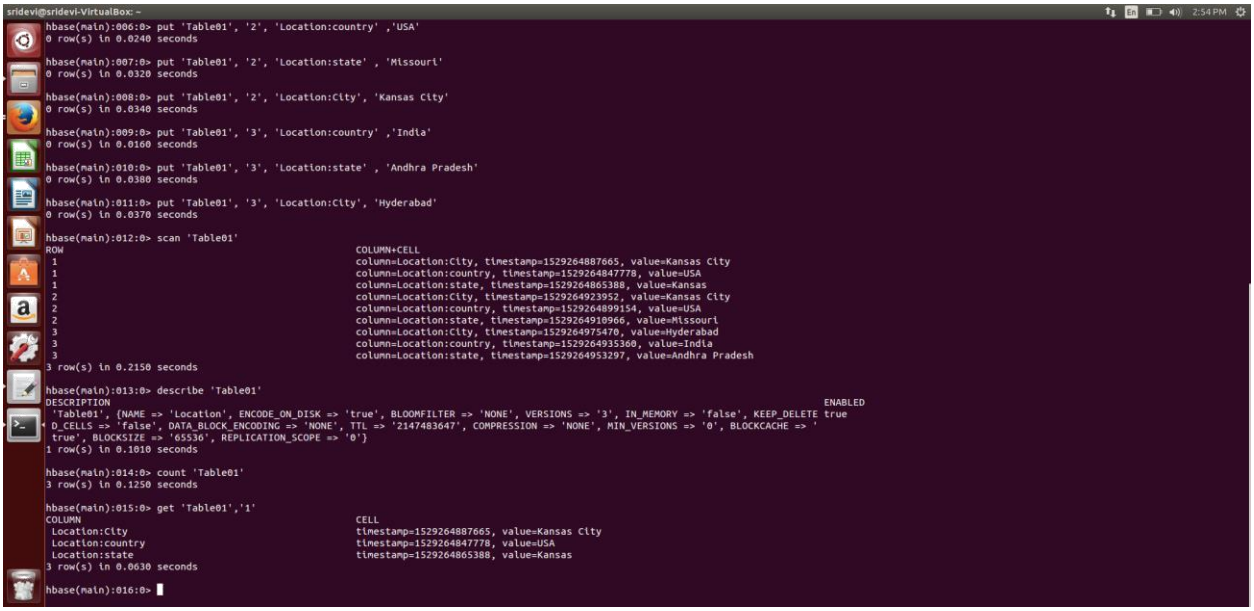
Creating a table with name UC1 and adding a column family Location which contains country, state and city columns

```
> create 'UC1', 'Locations'
```

```
> put ' UC1', '1', 'Locations:country' ,'India'
> put ' UC1', '1', 'Locations:state' , 'Telangana'
> put 'UC1', '1', 'Locations:City', 'Hyderabad'
> put 'UC1', '2', 'Locations:country' ,'USA'
> put 'UC1', '2', 'Locations:state' , 'Missouri'
> put 'UC1', '2', 'Locations:City', 'Kansas City'
> put 'UC1', '3', 'Locations:country' ,'China'
> put 'UC1', '3', 'Locations:state' , 'Shejdan'
> put 'UC1', '3', 'Locations:City', 'Hong Kong'
> put 'UC1', '3', 'Locations:country' ,'China'
> put 'UC1', '3', 'Locations:state' , 'Shejdan'
> put 'UC1', '3', 'Locations:City', 'Juipan'
```

```
scan 'UC1'
describe 'UC1'
count 'UC1'
get 'UC1','1'
```

Output Screenshots:



USECASE-2

Creating a table with name UC2 and adding a column family Student and Courses which contains Student details and courses enrolled by each student

> create 'UC2','Students', 'Courses'

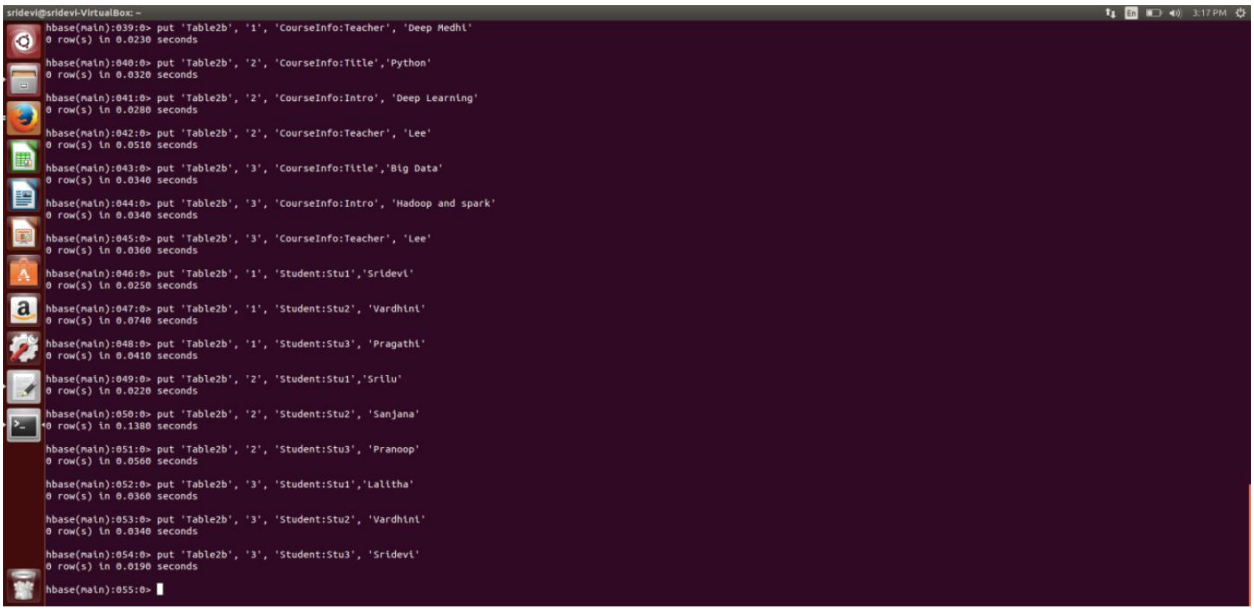
> put 'UC2', '1', 'Students:Name','Walter'
> put 'UC2', '1', 'Students:SEX', 'Male'
> put 'UC2', '1', 'Students:AGE', '24'
> put 'UC2', '2', 'Students:Name','Pranoop'
> put 'UC2', '2', 'Students:SEX', 'Male'
> put 'UC2', '2', 'Students:AGE', '20'
> put 'UC2', '3', 'Students:Name','Vinay'
> put 'UC2', '3', 'Students:SEX', 'Male'
> put 'UC2', '3', 'Students:AGE', '23'

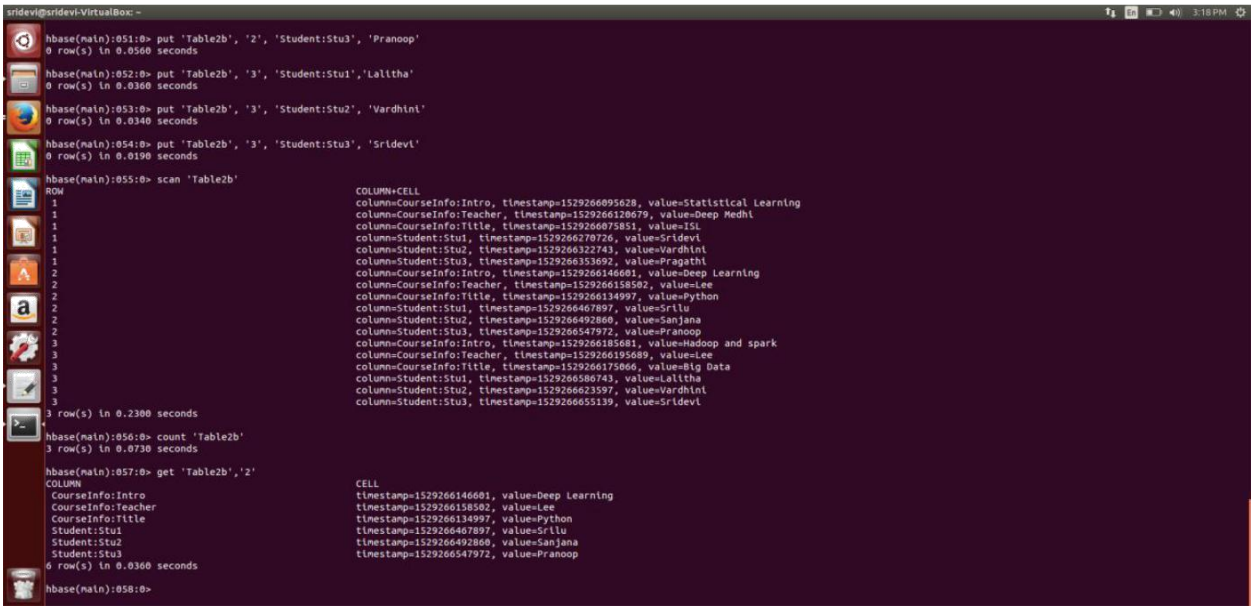
```
put 'UC2', '1', 'Courses: Course1','ISL'
put 'UC2', '1', 'Courses: Course2', 'Big Data'
put 'UC2', '2', 'Courses: Course1','Python'
put 'UC2', '2', 'Courses: Course2', 'ASE'
put 'UC2', '3', 'Courses: Course1','Big Data'
put 'UC2', '3', 'Courses: Course2', 'ISL'

scan 'UC2'
describe 'UC2'
count 'UC2'
get 'UC2','2'
```

Creating a table with name UC2b and adding a column family CourseInfo and Student which contains Course details and Students enrolled in each course

```
> create 'UC2b','CourseInfo', 'Students'

> put 'UC2b', '1', 'CourseInfo: Title', 'ISL'
> put 'UC2b', '1', 'CourseInfo: Intro', 'Statistical Learning'
> put 'UC2b', '1', 'CourseInfo: Teacher', 'Deep Medhi'
> put 'UC2b', '2', 'CourseInfo: Title', 'Python'
> put 'UC2b', '2', 'CourseInfo: Intro', 'Deep Learning'
> put 'UC2b', '2', 'CourseInfo: Teacher', 'Lee'
> put 'UC2b', '3', 'CourseInfo: Title', 'Big Data'
> put 'UC2b', '3', 'CourseInfo: Intro', 'Hadoop and spark'
> put 'UC2b', '3', 'CourseInfo: Teacher', 'Mayanka'


put 'UC2b', '1', 'Students: Stu1','Walter'
put 'UC2b', '1', 'Students: Stu2', 'Vinay'
put 'UC2b', '1', 'Students: Stu3', 'Pragathi'
put 'UC2b', '2', 'Students: Stu1','Srilu'
put 'UC2b', '2', 'Students: Stu2', 'Sanjana'
put 'UC2b', '2', 'Students: Stu3', 'Pranoop'
put 'UC2b', '3', 'Students: Stu1','Lalitha'
put 'UC2b', '3', 'Students: Stu2', 'Vinay'
put 'UC2b', '3', 'Students: Stu3', 'Sridevi'

scan 'UC2b'
count 'UC2b'
get 'UC2b','2'
```

Output Screenshots:





USECASE -3

Creating a table with name UC3 and adding a column family UserDetails and EventDetails

create 'UC3','UserDetails', 'EventDetails'

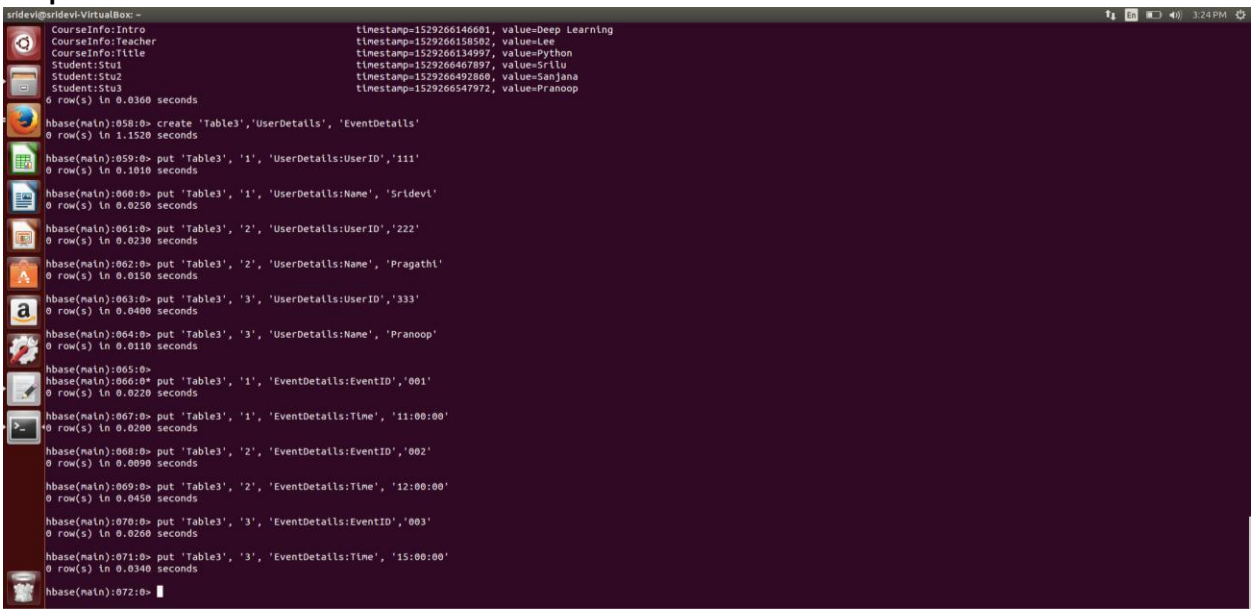
> put 'UC3', '1', 'UserDetails:UserID','8'

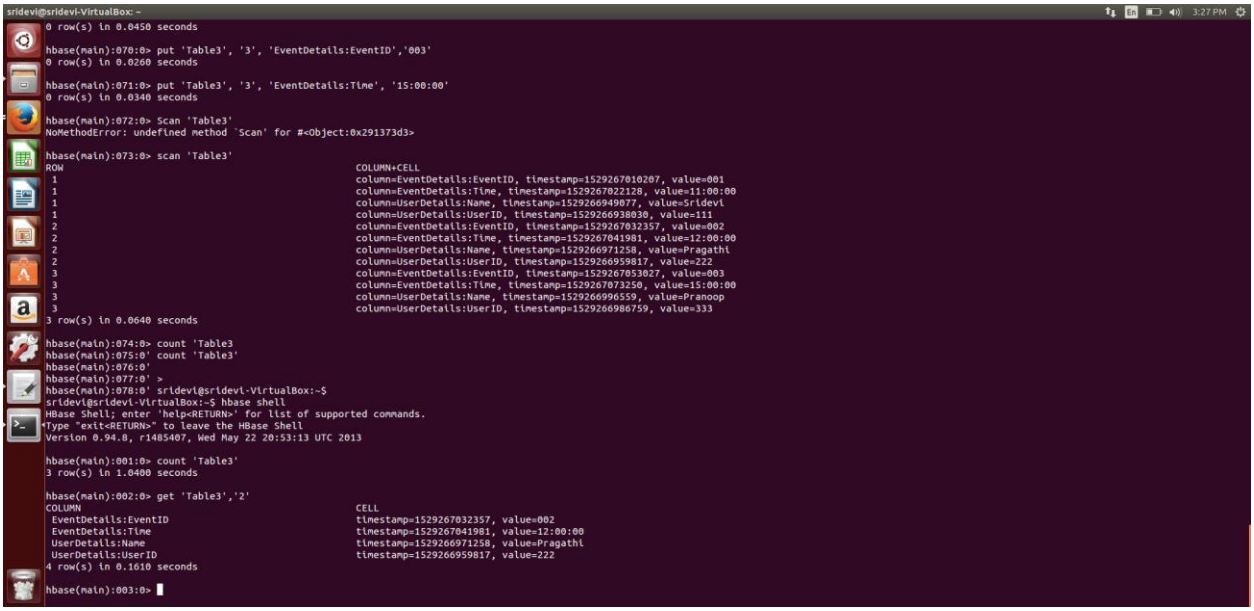
> put 'UC3', '1', 'UserDetails:Name', 'Walter'
> put 'UC3', '2', 'UserDetails:UserID','23'
> put 'UC3', '2', 'UserDetails:Name', 'Ashish'
> put 'UC3', '3', 'UserDetails:UserID','14'
> put 'UC3', '3', 'UserDetails:Name', 'Pranoop'

> put 'UC3', '1', 'EventDetails:EventID','001'
> put 'UC3', '1', 'EventDetails:Time', '11:00:00'
> put 'UC3', '2', 'EventDetails:EventID','002'
> put 'UC3', '2', 'EventDetails:Time', '12:00:00'
> put 'UC3', '3', 'EventDetails:EventID','003'
> put 'UC3', '3', 'EventDetails:Time', '15:00:00'

scan 'UC3'
count 'UC3'
get 'UC3','2'

Output Screenshots:





USECASE-4

Creating a table with name UC3 and adding a column family User and Friends

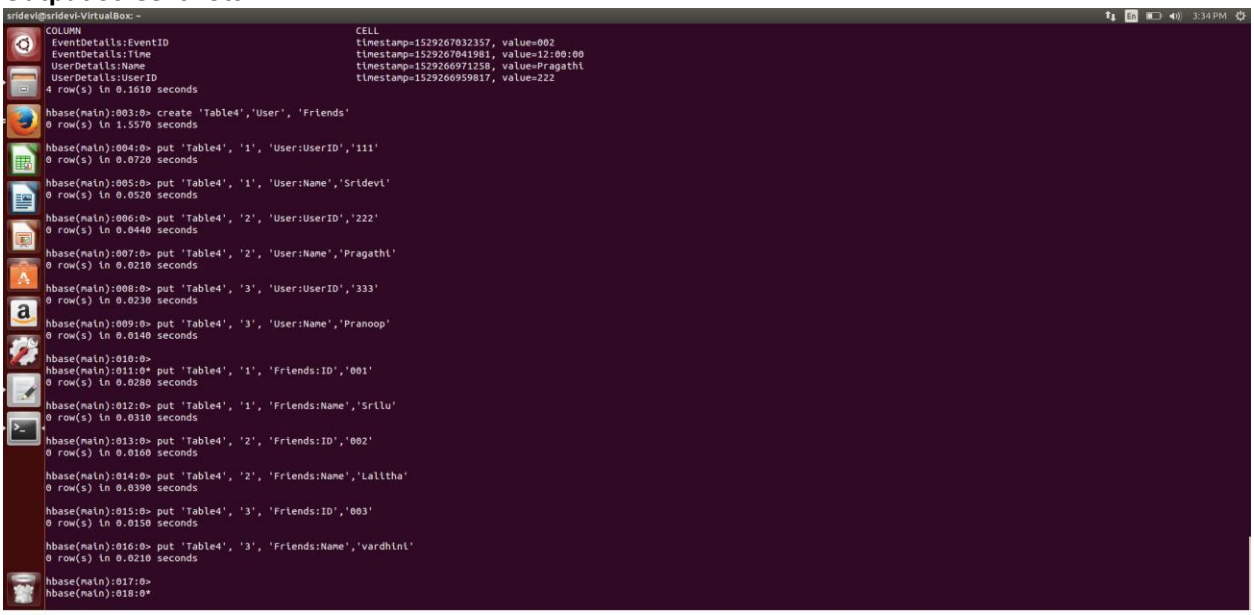
create 'UC4','User', 'Friends'

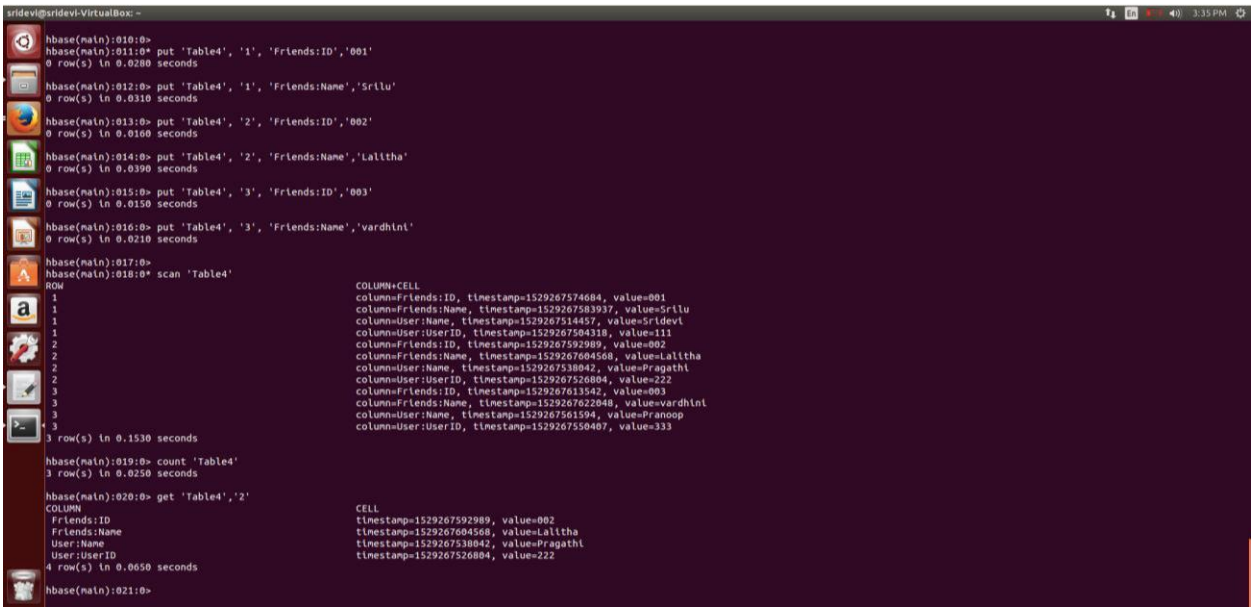
> put 'UC4', '1', 'User:UserID','8'
> put 'UC4', '1', 'User:Name','Walter'
> put 'UC4', '2', 'User:UserID','23'
> put 'UC4', '2', 'User:Name','Praveen'
> put 'UC4', '3', 'User:UserID','14'
> put 'UC4', '3', 'User:Name','Pranoop'

> put 'UC4', '1', 'Friends:ID','001'
> put 'UC4', '1', 'Friends:Name','Ashu'
> put 'UC4', '2', 'Friends:ID','002'
> put 'UC4', '2', 'Friends:Name','Vinay'
> put 'UC4', '3', 'Friends:ID','003'
> put 'UC4', '3', 'Friends:Name','Tanmayee'

scan 'UC4'
count 'UC4'
get 'UC4','2'

Output Screenshots:





USECASE-5

Creating a table with name UC5 and adding a column family http and User

create 'UC5','http','User'

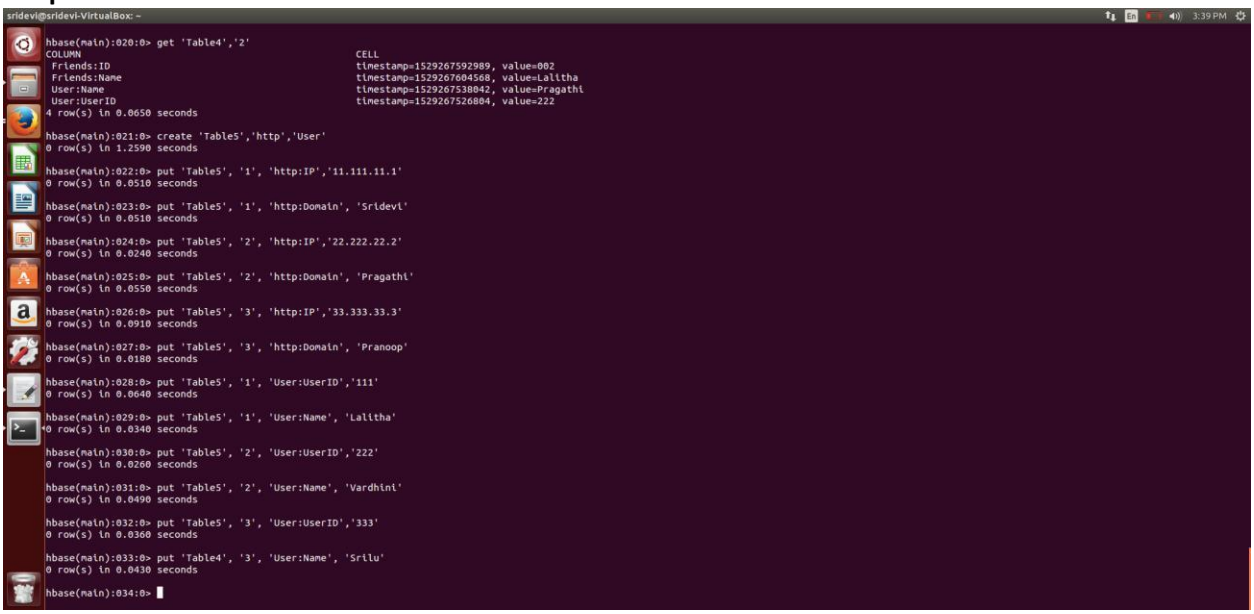
> put 'UC5', '1', 'http:IP','11.111.11.1'
> put 'UC5', '1', 'http:Domain', 'Sri'

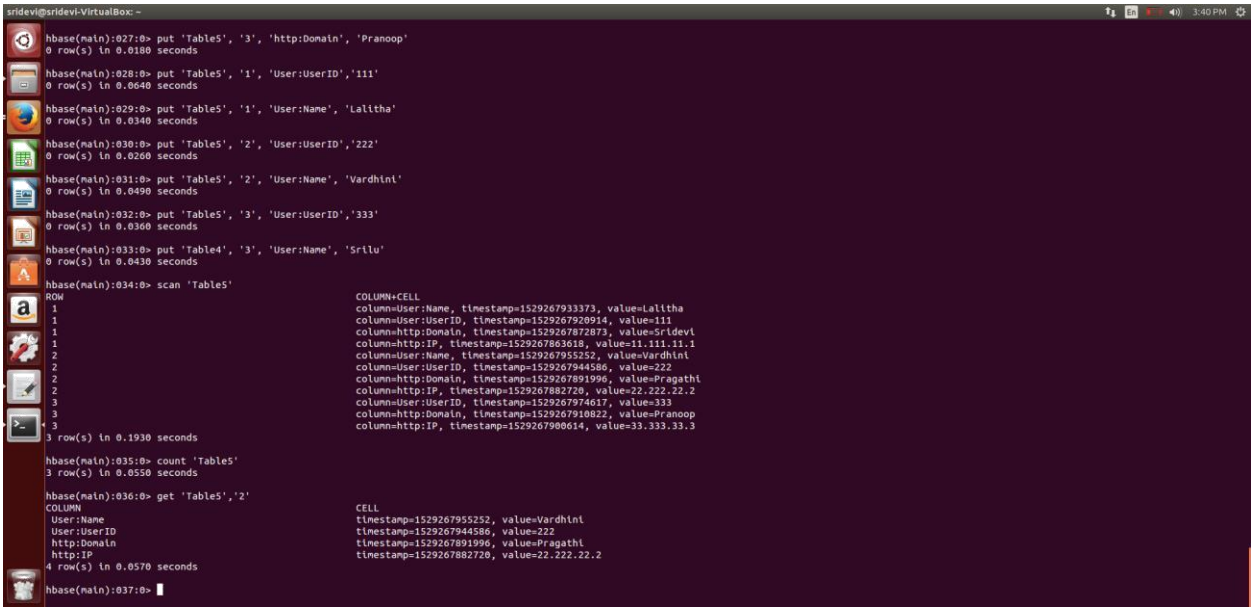
> put 'UC5', '2', 'http:IP','22.222.22.2'
> put 'UC5', '2', 'http:Domain', 'Praneeth'
> put 'UC5', '3', 'http:IP','33.333.33.3'
> put 'UC5', '3', 'http:Domain', 'Pranoop'

> put 'UC5', '1', 'User:UserID','11'
> put 'UC5', '1', 'User:Name', 'Lalli'
> put 'UC5', '2', 'User:UserID','22'
> put 'UC5', '2', 'User:Name', 'Varsh'
> put 'UC5', '3', 'User:UserID','33'
> put 'UC4', '3', 'User:Name', 'Srilekha'

scan 'UC5'
count 'UC5'
get 'UC5','2'

Output Screenshots:





Question 2:

a. General HBase shell commands

hbase> status

hbase> status ‘simple’

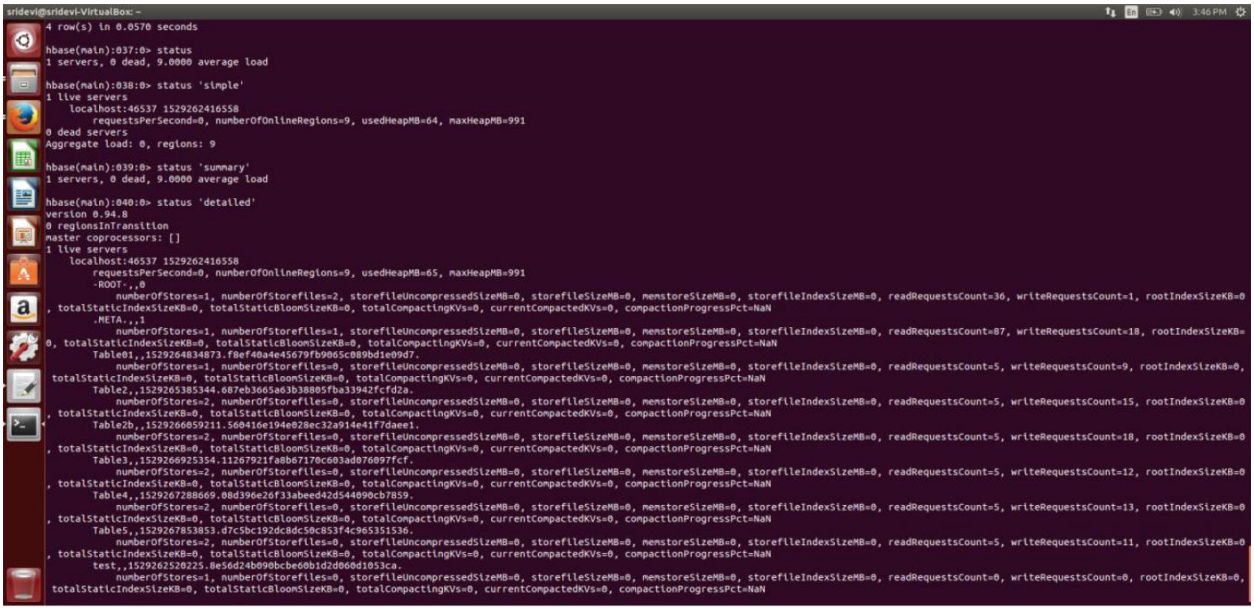
hase> status ‘summary’

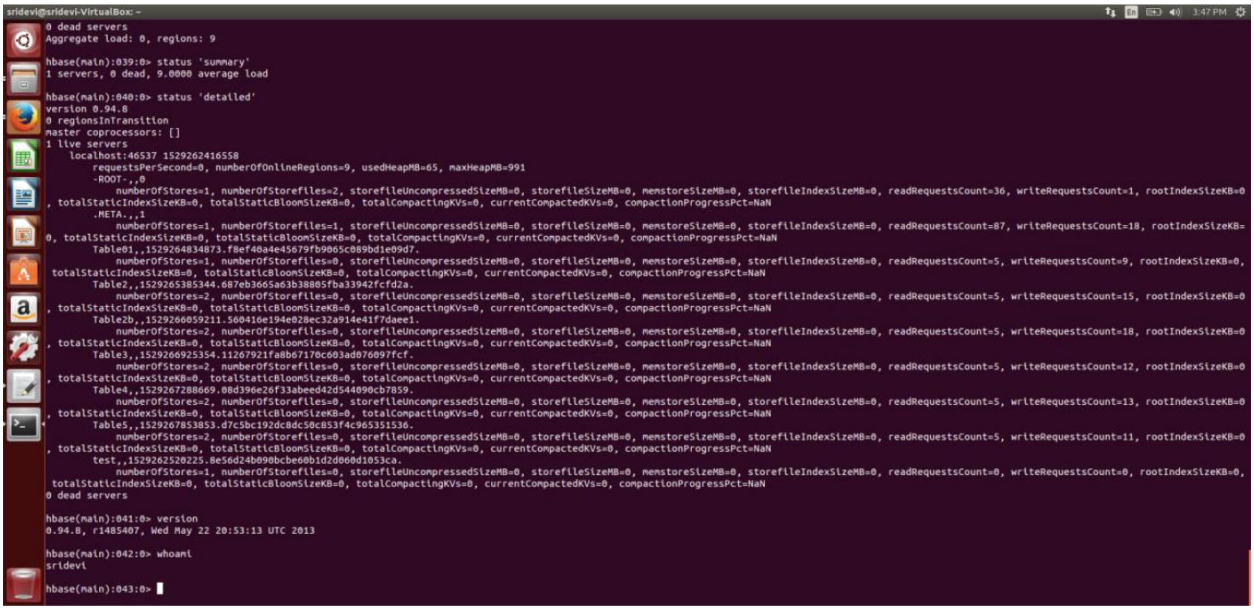
hbase> status ‘detailed’

hbase> version

hbase> whoami

Output Screenshots:





b. Tables Management commands

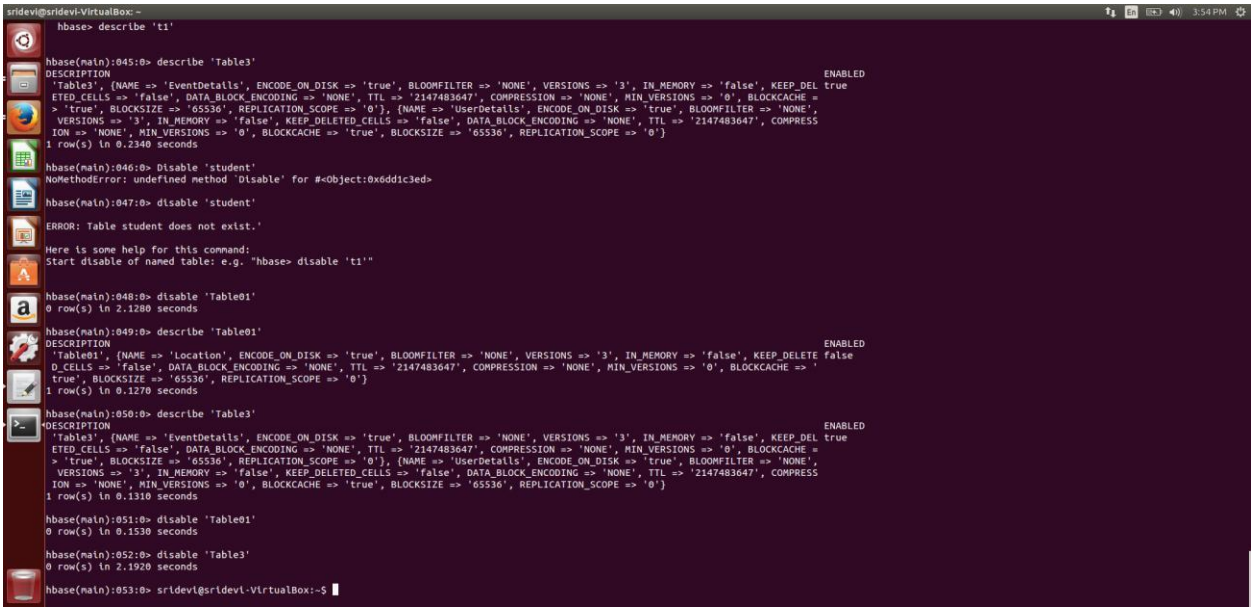
describe 'UC1'

describe 'UC3'

disable 'UC1'

disable 'UC3'

Output Screenshots:



c. Data Manipulation commands

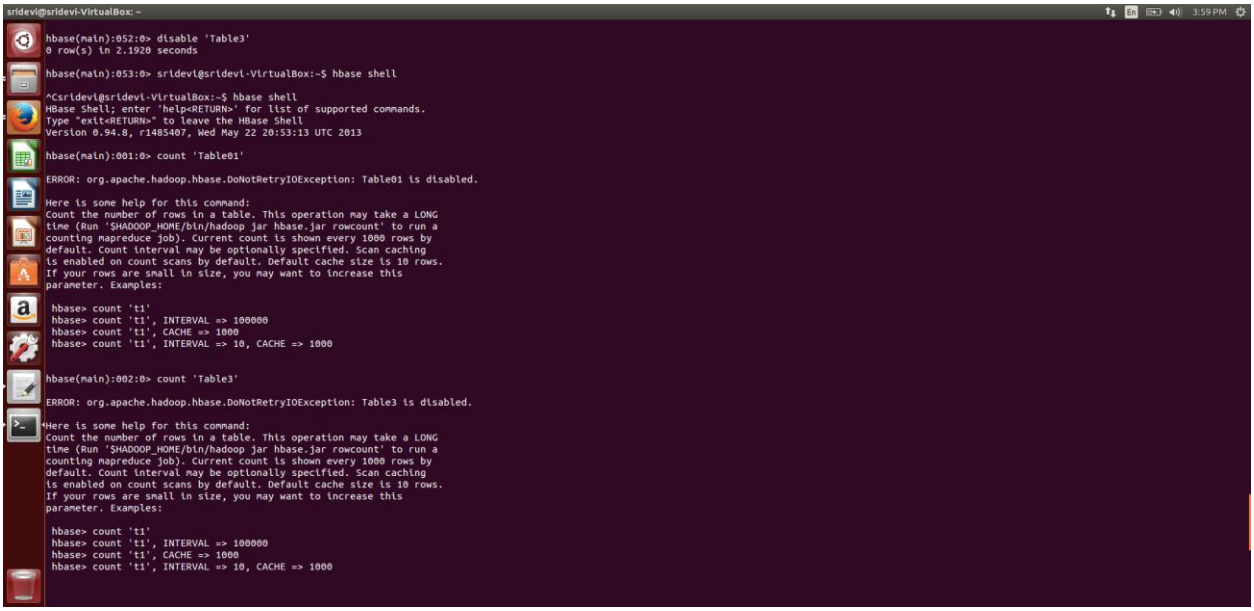
count 'UC1'

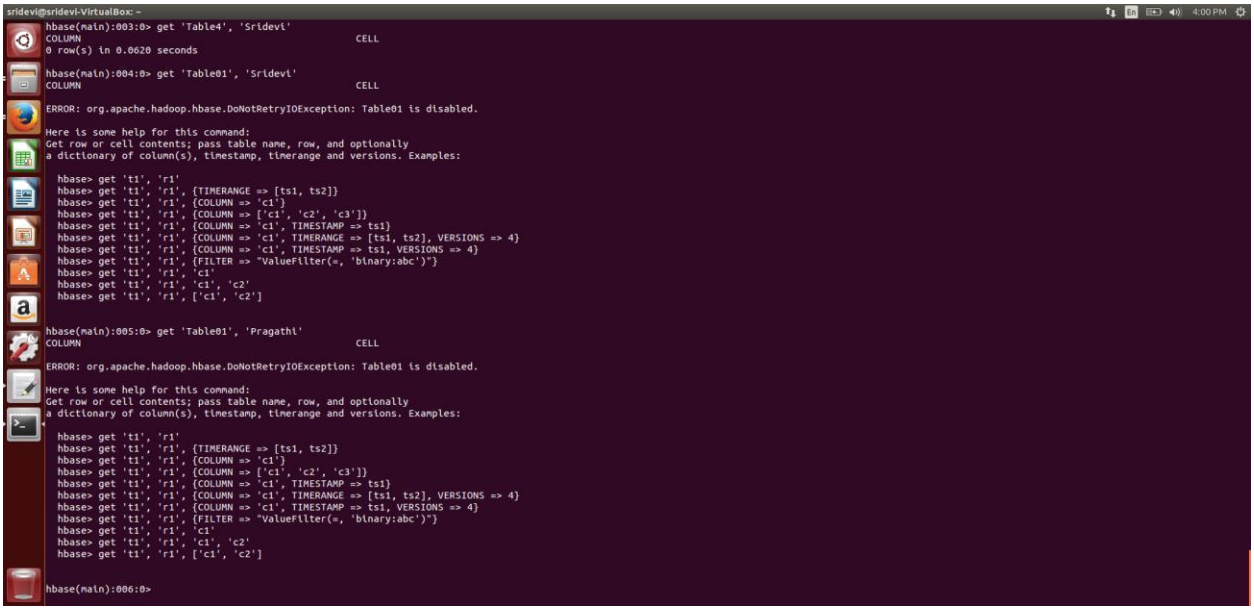
count 'UC3'

get 'UC1', 'Vinay'

get 'UC3', 'Pranoop'

Output Screenshots:





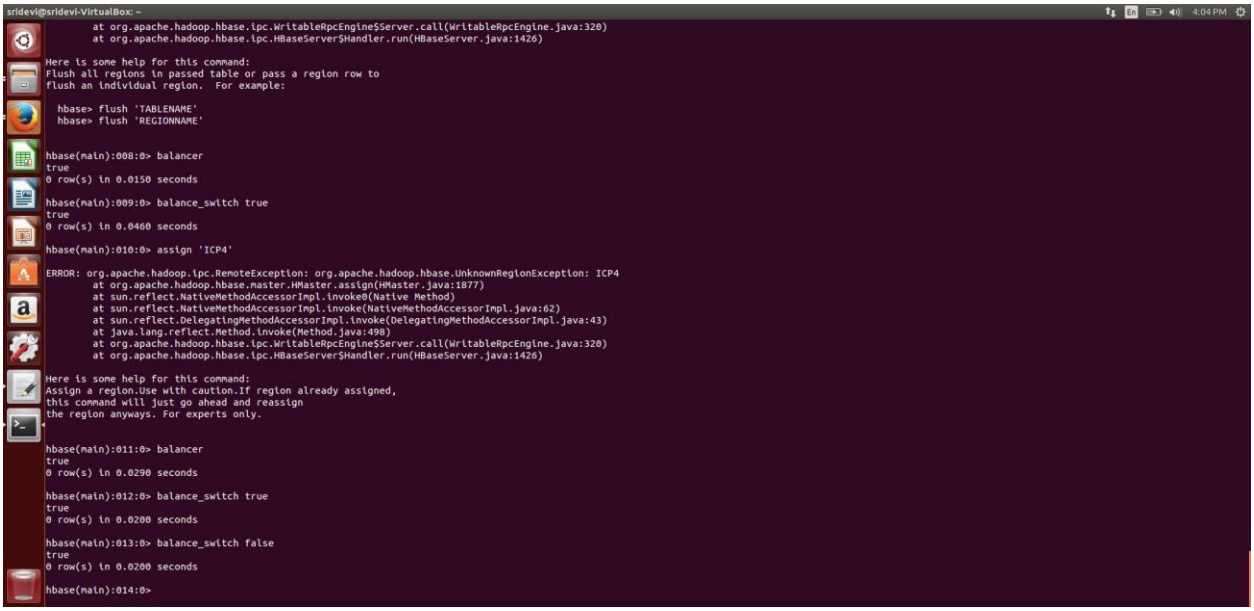
d. HBase surgery tools

balancer

balance_switch true

balance_switch false

Output Screenshots:



Team Members:

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